L 00894-67

ACC NR: AP6021379

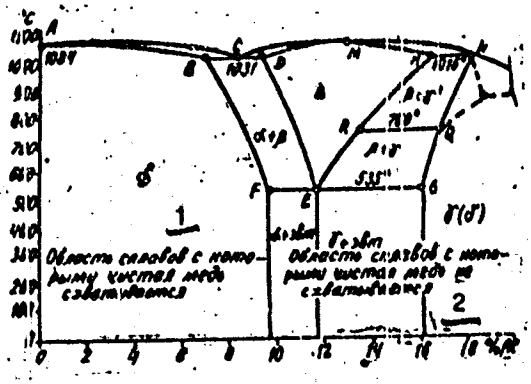

Fig. 1. (Key: 1 - range of alloys gripped by pure copper; 2 - renge of alloys not gripped by pure copper)

and concentration of the alloy components in solid solution. The found law is in good agreement with the theory of alloys. Orig. art. has: 2 graphs, 2 tables, and 1 diagram.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 004/ OTH REF: 002

Card 2/2 afs

L 9430-66 EWT(m)/T/EWT(t)/EWP(b) IJP(c) JD
ACC NR: AT5025547 SOURCE CODE: UR/3168/62/000/001/0003/0005

AUTHORS: Ametov, M. Yu.; Polyakov, S. M.

ORG: Azerbaidzhan Petroleum and Chemical Institute im. M. Azizbekov (Azerbaydzhanskiy institut nefti i khimii)

TITLE: Increasing the life of parts operating in a furnace gas atmosphere by liquid calorizing

SOURCE: Baku. Azerbaydzhanskiy institut nauchno-tekhnicheskoy informatsii. Sbornik nauchno-tekhnicheskoy informatsii. Seriya Mashinostroitel'naya promyshlennost', no. 1, 1962. Tekhnika i tekhnologiya v mashinostroyenii. (Engineering and technology in machinery manufacture), 3-9

TOPIC TAGS: calorizing, muffle furnace, aluminum, metal coating/ ST3 steel alloy, ACh 3 aluminum

ABSTRACT: Liquid calorizing (aluminum coating) to increase the life of steel parts operating in a furnace atmosphere (muffle furnace) was investigated. Specimens (20 x 70 mm) of steel ST3 were cleaned and dipped into a molten aluminum bath (6-8% iron content) at temperatures of 700-900C. It was found that the best temperature

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range was 750-800C and that normal (secondary) aluminum of type ACh-3 could be used. Dipping for 10, 20, 30, and 60 minutes showed that an aluminum ferrite coating of 0.07 mm (10 minutes) to 0.45 mm (60 minutes) was formed which showed satisfactory bonding for dipping times of 30 and 60 minutes. The specimens were subjected to 1100C for 24 hours in a laboratory furnace and to 920-950C for 10 days under industrial conditions. Comparison with uncalorized specimens showed that the latter had lost almost one half of their weight, while the calorized specimens showed no oxidation effects. Calorized standard muffle furnaces (240-mm diameter, 170-mm high, 10-mm thick) were compared with uncalorized furnaces under industrial conditions (900-950C for 16-24 hours, cooling, and then repeating the cycle). The uncalorized muffles failed after 12 cycles, the calorized failed after 10-22 cycles. In all cases it was found that failure occurred at the welds, not because of calorized material deterioration. Similar experiments using low carbon steel (C - 0.17%) showed a muffle life increase by a factor of 4-5 for calorized muffles. Orig. art. has: 4 figures.

SUB CODE: 13, 11/ SUBM DATE: none/ ORIG REF: 004/ OTH REF: 001

FROLOV, A.; MISHUROV, N.; GORODNICHENKO, I.; ZAGORUYKO, M.; AMETSHAYEV, I.

The virgin lands should have fully qualified machine-operating personnel. Prof.-tekh. obr. 18 no.1:1-2 Ja '61. (MIRA 14:2)

1. Direktor Uchilishcha mekhanizatsii sel'skogo khozyaystva No.35 Severo-Kazakhstanskoy oblasti (for Frolov). 2. Direktor Uchilishcha mekhanizatsii sel'skogo khozyaystva No. 47 TSelinnogo kraya (for Mishurov). 3. Direktor Uchilishcha mekhanizatsii sel'skogo khozyaystva No.13 Zapadno-Kazakhstanskoy oblasti (for Gorodnichenko). 4. Direktor Uchilishcha mekhanizatsii sel'skogo khozyaystva No. 76 Kustanayskoy oblasti (for Zagoruyko). 5. Direktor Uchilishcha mekhanizatsii sel'skogo khozyaystva No.23 Alma-Atinskoy oblasti (for Ametshayev).
(Kazakhstan—Farm mechanization—Study and teaching)

AMFILOKHIYEV, A.A.

YAKOVLEV, A.V., kand.tekhn.nauk; AMFILOKHIYEV, A.A., red.; GVIRTS, V.L., tekhn.red.

[Prefabricated-sectional pavement made of latticed reinforced concrete slabs] Sborno-razbornye dorozhnye pokrytiia is reshetchatykh zhelezobetonnykh plit. Leningrad, Leningr. dom nauchno-tekhn.propagandy, 1955. 13 p. (Informatsionno-tekhnicheskii listok, no.2(50)) (MIRA 11:1)

(Pavements, Concrete)

AMFILOKHIYEVA, M.N.

AMFILOKHIYEVA, M.N.; VOROB'YEVA, Ye.Ye.; ROGOVA, O.P.

V.N.Rogovin's method for treating the umbilicus. Vop.okh.mat. i det. 3 no.1:73-76 Ja-F '58. (MIRA 11:2)

1. Iz akusherako-ginekologicheskoy kliniki lechebnogo fakul'teta II Moskovskogo meditsinskogo instituta (zav. kafedroy - prof. I.F. Zhordaniia) i 1-y Gorodskoy klinicheskoy bol'nitsy imeni N.I.Pirogova (glavnyy vrach - zasluzhennyy vrach RSFSR L.D.Chernyshov)
(UMBILICUS)

AMFILOKHIYEVV, V.B.

Modernization of the T-2 wind tunnel. Trudy LKI no.38:5-13 '62.
(MIRA 16:7)

1. Kafedra gidromekhaniki Leningradskogo korablestroitel'nogo instituta.

(Wind tunnels)

AMFITEATROV, F. V.

"The Struggle Against the Outbreak of Foot-and-Mouth Disease in the Tatar ASSR". Iz. Bakt. inst. Vet. upr. NKZ TASSR, t. III, vyp. 2, 1960.

AMFITEYATROV, F.V.

Yegorov, I. Ya.: Hexachloran and its utilization in veterinary medicine. Under the editorship of F.V. AMFITEYATROV. Kazan. Tatar State Publishing House, 1952, 52 pages with illustrations (Ministry of Agriculture, Tatar ASSR, Kazan Scientific Research Veterinary Institute). Price 60 kopeks. 2,079 copies.

SO: Veterinariya; Vol. 30; No. 3; March 1953 uncl

TABCON

AMFITEATROV, F.Z., doktor veterinarnykh nauk; [illegible], V.F.; SHELASHSKIY, V.A.; ABUZAYEV, Kh.G.

Using dry virus vaccine made by the State Scientific Control Institute for Veterinary Preparations against foot-and-mouth disease. Veterinariia 40 no.8:15-16 Ag '63. (MIRA 17:10)

1. Kazanskiy veterinarnyy institut (for Amfiteatrov). 2. Starshiy veterinarnyy vrach Veterinarnogo otdela Ministerstva proizvodstva i zagotovok sel'skokhozyaystvennykh produktov Tatarskoy ASSR (for Shelashskiy). 3. Direktor veterinarnoy laboratorii Veterinarnogo otdela Ministerstva proizvodstva i zagotovok sel'skokhozyaystvennykh produktov Tatarskoy ASSR (for Abuzayev).

AMFITEATROV, Fedor Zakharovich

[Getting rid of foot-and-mouth disease a t its source] Likvidatsiia iashchura v pervichnom ochage. Moskva, Gos. izd-vo sel'khoz. lit-ry, 1956. 31 p. (MIRA 10:9)
(Foot-and-mouth disease)

AMFITEATROV, F., professor, doktor veterinarnykh nauk.

The book "Communicable diseases in animals" by A.L. Skomorokhov. Reviewed by F. Amfiteatrov. Veterinariia 34 no.5:84-86 My '57.
(Communicable diseases in animals) (MLRA 10:6)

AMFITEATROV, F.Z., prof.

Effective principles underlying the system of measures for the elimination of foot-and-mouth disease in farm animals. Uch. zap. KVI 89:15-29 '62. (MIRA 18:8)

1. Virusologicheskaya laboratoriya (zav. - prof. F.Z.Amfiteatrov) Kazanskogo veterinarnogo instituta.

AMFITEATROVA, N. F.

17 (3, 6) SOV/16-60-4-8/47

AUTHOR: Platyrtseva, I.Ye., Neeshilova, N.A., Khisamutdinov, A.G., Baydasheva, Yu.G., Amfiteatrova, N.F., Mel'nikova, V.K. and Kolesnova, N.K.

TITLE: A Study of the Reactogenicity of Pertussis-Diphtheria Vaccine

PERIODICAL: Zhurnal mikrobiologii, epidemiologii i immunobiologii, 1960, Nr 4, pp 34 - 39 (USSR) VOL. 31

ABSTRACT: The authors summarise the data on the reactogenicity of pertussis-diphtheria vaccine, derived from mass immunization with such vaccine prepared by the Institut mikrobiologii i epidemiologii imeni Gamaleya AMN SSSR (Institute of Microbiology and Epidemiology imeni Gamaleya of the AMN, USSR) at Kolomodel'sk in the fall of 1958. Most of the reactions in children immunized with the vaccine were weak (30.6%) or mild (38.3%). After the second and third inoculation, the percentage of children with a general reaction declined. Most of the children who did react showed a weak general reaction. Local reactions were more common than general ones. Most of the children who reacted did so with a weak (49.6%) or moderate (51.5%) local reaction. After the second and third inoculation the percentage of children with a local reaction dropped. The reactogenicity of the vaccine varied

Card 1/2

ASSOCIATION: Kazanskiy institut epidemiologii i gigiyeny (Institute of Epidemiology and Hygiene, Kazan')

SUBMITTED: June 16, 1959

Card 2/2

ALATYRTSEVA, I.Ye., KOLPACHIKHIN, F.B.; AMFITEATROVA, N.F.; SHAROVSKAYA, V.N.; DVORKINA, A.I.; MEL'NIKOVA, V.K.; BERZON, I.G.

Intranasal revaccination against diphtheria. Report No. 1. Vop.okh. mat.i det. 7 no.4:29-32 Ap '62. (MIRA 15:11)

1. Iz Kazanskogo nauchno-issledovatel'skogo instituta epidemiologii, mikrobiologii i gigiyeny.
(DIPHTHERIA--PREVENTIVE INOCULATION)

AMFITEATROVA, N.F.; POPOVA, Ye.I.

Influence of active immunization on the epidemic process in whooping cough. Vop.okh.mat.i det. 7 no.4:40-44 Ap '62. (MIRA 15:11)

1. Iz Kuzanskogo nauchno-issledovatel'skogo instituta epidemiologii, mikrobiologii i gigiyeny.
(WHOOPING COUGH--PREVENTIV INOCULATION)

AMFITEATROVA, T. A.

"Effect of Scattering of Metal on Its Deformation Behavior in Active and Inactive Mediums." Sub 15 Jun 51, Moscow Order of Lenin State U imeni M. V. Lomonosov.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

AMFITEATROVA, T. A.

18-T7

USSR/Chemistry - Surface-Active Compounds 11 Feb 51

"Modification of the Crystalline Structure of Metals Subjected to Deformation in Solutions of Surface-Active Compounds," V. N. Rozhanskiy, T. A. Amfiteatrova, Acad. P. A. Rebinder, Lab. Colloid Chemy, Moscow State U imeni M. V. Lomonosov.

"Dok Ak Nauk SSSR" Vol-LXXVI, No 5, pp 697-698

Compared kinetics of plastic deformation obtained by stretching copper wire in surface-active media (0.5% soln of oleic acid or cetyl alc in nonpolar

18-T7

USSR/Chemistry - Surface-Active Compounds (Contd) 11 Feb 51

kerosene) and surface-inactive medium (nonpolar kerosene). Rate of stretching and intensification of int dispersion (as shown by X-ray diagrams) are greater in surface-active medium.

18-T7

AMFITEATROVA, T. A.

"Influence of the Degree of Dispersion (Microstructure) of a Metal [Copper and Aluminum] on Its Plastic Flow in Active Media. T. A. Amfiteatrova and B. Ya. Yampol'sky (*Doklady Akad. Nauk SSSR*, 1950, 72, 5), 735–738).—[In Russian]. Wires of 99·98% electrolytic Cu (0·50 and 2·0 mm. in dia.) and of 99·95% Al (1·0 and 1·3 mm. in dia.), of initial length 180 mm., were given suitable preliminary plastic deformations and heat-treatments in the absence of O (2–3 hr. at 300°–650° C. for Cu, at 200°–610° C. for Al) to produce specimens of various mean grain-sizes (0·2)–0·0050 mm. for Cu; 0·25–0·060 mm. for Al). These were etched, washed, and given 3% elongation to impart uniform initial strengthening. Creep curves for const. loading were then obtained for specimens in air, in a non-polar solvent (kerosene, freed from polar impurities), and in soln. of surface-active substances. From the curves, the relative elongation $\alpha = 100 \cdot \Delta l/l_0$% and creep rate $V = \frac{d\varepsilon}{d\tau} = \frac{1}{l_0} \cdot \frac{d\Delta l}{d\tau}$ were determined, and hence the creep limit P_0, the strengthening coeff. λ, and the viscosity η were calculated, according to the creep theory of Likhtman (*ibid.*, 1950, 72, 1079). Preliminary experiments with mean grain sizes δ of ~0·1 mm. for Cu and ~0·15 mm. for Al showed that V was much greater for deformation in the active media than in air or kerosene (in which V was the same). The Rehbinder effect observed with single crystals therefore also occurs with polycryst. metals. The optimum concentrations for the surface-active substances in kerosene were (in mole/l.): butyl alcohol 1·25, hexyl alcohol, 0·75, octyl alcohol 0·30, cetyl alcohol 0·020, oleic acid 0·020, and Na dioctylsulphosuccinate 0·010. Values of P_0, V_0, η, and λ obtained in tests on Cu wires (d = 0·060 mm.) at 20° C. under a stress of 9·15 kg./mm.^{2} in these soln. at the optimum concentrations are compared with the values for tests in an inactive medium (air or kerosene). In the soln. λ is reduced by 10–12%, η falls to about half its value, P_0 is also reduced, and V_0 is increased to over three times its value. Al behaves similarly. Tests in 0·02M-cetyl alcohol soln. showed that for both metals the effect was dependent on δ; it was not observed in fine-grained specimens, but became noticeable at D = 0·04, where $D = \delta/d$, and d is the wire dia. The effect increased with increasing grain-size, becoming a max. at D = ~0·20–0·25. Thus with Cu wire of d = 0·5 mm., the effect became apparent only at δ = 0·020 mm., reached a max. at δ = 0·050 mm. and then remained almost const.; with 2·0-mm.-dia. wire the corresponding values were 0·080 and 0·20 mm. This is shown graphically by plotting log (V_a/V_0) against D, the subscripts a and 0 denoting active and inactive media. These results indicate that in the time available the surface-active substances only penetrate the intercrystal cracks between the outer layers of grains and do not reach the deeper layers, so that the larger the grain size, the deeper the penetration.—G. V. E. T.

General & Physical Chemistry Sec

CA

Effect of surface-active substances on the plastic flow of polycrystalline metals. T. A. Amfiteatrova and B. Ya. Yampol'skii (M. V. Lomonosov State Univ., Moscow). *Doklady Akad. Nauk S.S.S.R.* 84, 305-8(1952).—Wires of Cu (diam. 0.5 mm., annealed at 300-850° in graphite, grain size 0.08 mm.) and of Al (diam. 1.0 mm., annealed at 300-600° in H_2, grain size 0.2 mm.), 18 cm. long, were stretched under const. stress in an inactive medium (air or nonpolar kerosene) and in surface-active media (solns. of alcs., oleic acid, Na dioctyl sulfosuccinate, and butyl stearate); all samples received a preliminary extension of 3%. Kinetic curves of plastic flow obtained under a stress close to the yield point (about 0 and 7 kg./sq. mm. for Cu and Al, resp.) gave the relative elongation $\epsilon = \Delta l/l$ (in %) and the rate of elongation $v = d\epsilon/dt$. The flow curves in air and in nonpolar kerosene are practically identical. The results for Cu in active media are presented in plots of v at the optimum relative ϵ of 0.55%, as a function of log c (concn. of the active substance); there is, in each case, an optimum c at which v is max. The optimum c is, for $HnOH$ 2.25, C_4H_9OH 0.75, $C_6H_{13}OH$ 0.30, and cetyl alc. 0.020 mole/l. The activity increase coeff. of the alcs. increases with the mol. wt., in conformity with Traube's rule, but with an increment of 1.7-1.4 per CH_2 group. Solns. of oleic acid gave a max. v at $c = 0.025$, and Na dioctylsulfosuccinate at 0.010 mole/l. Butyl stearate gave no significant effect. In the initial period of plastic deformation, the velocity of flow falls rapidly as a result of hardening; the flow velocity also decreases sharply with increasing deformation. Curves of log (v_a/v_0) (where the subscripts a and 0 refer to the surface-active and the inactive medium, resp.) of Cu, as a function of ϵ, at const. optimum c of the alcs., pass through a max. at about $\epsilon = 0.5$-0.6%; the max. lies at about the same ϵ also for the other surface-active substances. This max. of the adsorption effect evidently corresponds to the development of a max. no. of microcracks under the action of the adsorption of the surface-active substance. With Al, the max. increase of v at the optimum c of the active medium lies at $\epsilon = 0.0$%. In terms of the stress P, at const. c of the active substance, log (v_a/v_0) passes through a sharp max. (at about 9 kg./sq. mm. for Cu); at lower P, i.e. at lower v, there are not enough microcracks for the surface-active substance to exert a significant effect, and at higher P the slip mechanism of the deformation is disturbed and considerable hardening sets in. Also, at too high rates of deformation, the penetration of the surface-active substance will lag behind the formation of new microcracks, and the adsorption effect will become correspondingly weaker or disappear altogether.

N. Thon

AMFITEATROV, T.A.

PERIODICAL ABSTRACTS

AID 4193 - P

Sub.: USSR/Engineering

FRIDLYAND, L. A., T. A. AMFITEATROV and V. A. PETRUNICHEV
ZAKONOMERNOSTI PROTSESSA SVARKI PRI PLASTICHESKOM DEFORMIROVANII
(Regularities of the Welding Process in Plastic Deformations).
Avtomaticheskaya svarka, no. 1, Ja/F 1956: 38-46.

The authors present results of research in plastic deformations of welded surfaces and the characteristics of junctions as dependent on temperature of metals and methods of deformation. Spot welding and butt welding were used to ascertain regularities in the welding process. The mechanical characteristics of junctions depending on deformations and temperatures were derived from the butt welding of three different non-ferrous alloys. Recrystallization as a means of increased plasticity of junction was observed in welded junctions. The interdependability of temperature, plasticity and strength were observed under varying circumstances. Three tables, 7 graphs and 2 drawings. Two Russian references, 1953-54, and 1 British 1946.

Inst Metallurgy, AS USSR

TITLE: Weldability of Titanium (Issledovaniye svarivayemosti titana).

gation processes is described in detail.

The conclusions reached are the following:

1) The most difficult problem in welding titanium is the deterioration of mechanical properties in the metal at the zone of fusion.
2) The changing of σ_b, σ_s, and ψ in weld joints according to the temperature is of the same nature as in the base metal.
3) Intensive grain growth in the weld metal and in the adjacent parent metal is observed during welding.
4) The formability of weld joints in # 2 of titanium grades "ИМП-А" and "ВТ-1А" was very high and satisfied the production requirements.
5) The structure and the mechanical properties of low-temperature α-phase base metal are changing abruptly in the heating-part as well as in the cooling-part of the heat cycle; in the temperature interval of β-phase, σ_b and ψ are changing only insignificantly. After the thermal cycle of heating and cooling, titanium of all grades possesses lower mechanical properties.
6) For comparing the gas contents of the base metal, a special test is recommended, based on heating thin samples to 1300-1500° at

TITLE: Weldability of Titanium (Issledovaniye svarivayemosti titana).

different speeds. The criterion for evaluation in this test is the critical heating speed at which formation of bulges and pores is observed in the metal.
7) The choice of welding technology is to be based on keeping the metal a short time in the β-phase temperature of intensive grain growth, and on slowing down the cooling in the interval of $\beta \rightarrow \alpha$ conversion.

The article contains 5 tables, 5 diagrams, and 15 microphotographs.

ASSOCIATION: Institut metallurgii imeni A.A. Baykova AN SSSR (Institute for Metallurgy imeni A.A. Baykov, Academy of Sciences, USSR).

PRESENTED BY:

SUBMITTED:

AVAILABLE: At the Library of Congress.

Card 3/3

Investigation of the deformation of metals at low stress rates. I. On certain relations governing creep of copper and aluminium. (Cont.)

(the creep limit, the toughness and the coefficient of hardening) were determined for various conditions of deformation and preliminary work hardening of the specimens. It is shown that the mechanical properties of polycrystalline copper and aluminium depend on the grain-size of the metal and, with increasing dispersion, the creep limit, the toughness and the coefficient of hardening and also the elastic part of the deformation will increase. The influence of the temperature on the kinetics of the plastic deformation of the metal was also studied; with increasing temperature an intensive process of relaxation takes place in the deformed specimens, as a result of which the toughness, the yield point and the work hardening coefficient decrease. In addition to intragranular slip flow in the inter-crystalline layer takes place during the process of creep of the metal. The relative importance of the viscous flow increases with increasing temperature. 10 references, 8 of which are Russian.

Moscow State University
imeni M.V. Lomonosov.

Recd. Feb. 15, 1956.

AMFITEATROVA, T. A.

18(2)

Akademiya nauk SSSR. Institut metallurgii.

Titan i yego splavy; metallurgiya i metallovedeniye (Titanium and Its Alloys; Metallurgy and Physical Metallurgy) Moscow, Izd-vo AN SSSR, 1958. 209 p. 4,000 copies printed.

Resp. Ed.: N.V. Ageyev, Corresponding Member, USSR Academy of Sciences; Ed. of Publishing House: V.S. Rakhenik[illegible] Tech. Ed.: A.A. Kiseleva.

INTRODUCTION: This book, of which a Phase II Exploitation (SOV/1200) has been prepared, is a collection of scientific papers devoted to the study of titanium and its alloys from three main points of view: physical metallurgy, forming, and welding. Special problems investigated include structural changes occurring during welding, determination of the content of harmful phases, development of industrial methods of rolling, and oxidation at various temperatures.

PART I. PHYSICAL METALLURGY

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PART III. WELDING OF TITANIUM

Shorshorov, M.Kh., T.A. Amfiteatrova, and G.V. Nazarov (Institute of Metallurgy, USSR Academy of Sciences) Weldability of IMP-1 Titanium 180

IMP-1 titanium plates (100 x 40 x 2 mm) were butt-welded in a protective atmosphere (argon and helium), the added metal having the same chemical composition as the parent metal (typical analysis: 0.05 percent C, 0.3 percent Fe, 0.05 percent Si, 0,21 percent Ni, 0.08 percent N_2, 0.03 percent Cr, 0.3-0.6 percent O_2). Investigations were made of the following; mechanical properties of the weld metal; grain growth and changes in structure and mechanical properties of the heat-affected zone under various thermal conditions; and swelling of titanium on being heated. In the latter connection a test was developed for the comparative determination of the degree of saturation of the metal with hydrogen. Conclusions. (1) The main difficulties in developing the technological processes of welding titanium are connected with the deterioration of the properties of the

grain growth is intensive and to decreasing the cooling rate in the $\beta \rightarrow \alpha$ transformation temperature range. There are 12 figures, 2 tables, and 2 references (both Soviet).

Poplavko, M.V., N.N. Manuylov, and L.A. Gruzdeva (Ministry of the Aircraft Industry of the USSR) Some Problems in the Welding and Soldering of Commercial Titanium 194

VT-1D commercial titanium, which has a one-phase (alpha) structure, was investigated for weldability. Tests were performed on sheet metal rolled from ingots that were produced in an arc furnace with a nonmelting tungsten electrode. Conclusions. (1) VT-1D titanium sheet metal, when its properties are stable and its plasticity sufficiently high, exhibits good weldability characteristics in the following types of welding: argon-shielded arc welding (manual and automatic), spot welding, seam welding, and butt welding. (2) In order to produce welded joints with good properties, it is necessary to remove, before welding, any scale present on the surface as well as the surface layer of metal itself, if it is contaminated with gases (oxygen, hydrogen, nitrogen). These layers can be successfully removed by pickling in an acid medium. Scale removal can be facilitated

SOV/126-7-5-23/25

AUTHORS: Amfiteatrova, T. A. and Yampol'skiy, B. Ya.

TITLE: Investigation of Deformation of Metals under the Influence of Low Stresses (Issledovaniye deformatsiy metallov pri malykh napryazheniyakh) II. Influence of an Adsorption-Active Medium on the Creep of Copper and Aluminium (II. Vliyaniye adsorbtsionno-aktivnoy sredy na polzuchest' medi i alyuminiya)

PERIODICAL: Fizika metallov i metallovedeniye, Vol 7, Nr 5, pp 782-789 (USSR)

ABSTRACT: The influence of surface-active media on the deformation of metals has been studied by observing the kinetics of plastic deformation of copper and aluminium wire in solutions of various surface-active substances in a non-polar carbonaceous medium. Specimens made from copper wire of 0.50 and 2.0 mm diameter, and aluminium wire of 1.0 and 1.3 mm diameter, were heat treated by the method described by Yampol'skiy et al. (Ref.1) in order to obtain a definite dispersion of the microstructure with an average grain size δ. Before plotting flow curves all specimens were elongated by 3% in order to ensure uniform hardening. The aluminium specimens were tested with the standard (atmospheric) oxide film on

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Investigation of Deformation of Metals under the Influence of Low Stresses II. Influence of an Adsorption-Active Medium on the Creep of Copper and Aluminium

the metal surface, having a thickness of the order of several tens of Å. The copper specimens were etched with ammonium persulphate in order to give them a polished surface. The medium - non-polar kerosene - was thoroughly cleaned, the extent of cleaning being controlled by surface tension measurements ($\sigma \sim 50$ erg/cm^2). Oleic acid, butyl, hexyl, octyl and cetyl alcohols, as well as the preparation OT, were used as surface-active substances. The experiments were carried out in solutions of surface-active substances of various concentrations, and, for comparison, in a non-polar solvent under the same conditions. The flow diagrams for specimens under conditions of uniaxial straining were plotted at various stresses, which, however, were constant for a given experiment, close to the UTS of the deformed metal. The method for taking measurements and the instrumentation are accurately described by Yampol'skiy et alii (Ref.1). The specimen, held in the grips of a tensile machine, was placed in a glass tube filled with a solution of the surface-active substance, or the non-polar medium, in such a way that the entire working portion of the specimen was immersed in the

Investigation of Deformation of Metals under the Influence of Low Stresses II. Influence of an Adsorption-Active Medium on the Creep of Copper and Aluminium

liquid. The adsorption effect facilitating deformation of the metals investigated was estimated from the increase in the rate of flow of the specimens on straining in the active, as compared with a non-active, medium. The rate of flow was determined at equal degrees of elongation of the specimens, as the strength properties of the metal depend very largely on the degree of deformation. Measurements carried out in solutions of alcohols in non-polar kerosene at concentrations of from 0.050 mol/l. and above have shown that the rate of flow of both copper and aluminium specimens depends on the concentration of the surface-active medium in the solution. In Fig.1 typical curves of the kinetics of flow (creep) of a copper wire of 0.5 mm diameter in non-polar kerosene (lower curve) and in a solution of hexyl alcohol (0.75 mol/l. - upper curve) are shown. It was not possible to detect any difference in the rate of deformation of the specimens, under identical stresses, in air in the non-polar liquid. If the dependence of the initial flow rate of the metal in solutions of surface-active media is represented as

Investigation of Deformation of Metals under the Influence of Low Stresses II. Influence of an Adsorption-Active Medium on the Creep of Copper and Aluminium

a function of the logarithm of the concentration of the active medium in the solution, a clear relationship becomes evident exhibiting a sharp maximum at a definite concentration. For alcohols this relationship is shown in Fig.2. In Fig. 3 the change in flow rates of copper specimens during straining in a non-polar medium and in a solution of octyl alcohol (0.3 mol/l.) is shown. Fig.4 shows the dependence of the relative flow rate of copper specimens on the extent of deformation ε. Fig.5 shows the dependence of the adsorption effect, facilitating the deformation of metal, on the acting stress (copper in a solution of 0.02 mol/l. cetyl alcohol). In Fig.6 the dependence of the adsorption effect (relative increase in the flow rate of copper specimens) on the ratio of average grain size to specimen diameter is shown. The authors arrive at the following conclusions: 1. The adsorption effect facilitating deformation of polycrystalline copper and aluminium wire in uniaxial straining at low stresses in solutions of surface-active substances depends largely on the concentration of the surface-active substances.

Investigation of Deformation of Metals under the Influence of Low Stresses II. Influence of an Adsorption-Active Medium on the Creep of Copper and Aluminium

2. The optimum concentration of the surface-active substance, corresponding to the maximum adsorption effect, decreases with increase in its molecular weight. On deforming specimens in an active medium (under optimum conditions) the limiting creep decreases by 14 to 16%, the coefficient of hardening decreases by 10 to 12% and the ductility decreases by approximately twice.
3. The magnitude of the adsorption effect depends on the degree of deformation of the metal. The greatest value of the effect is observed at a relative deformation of the order of 0.5% for copper and of 1% for aluminium specimens.
4. The magnitude of the effect also depends on the acting stress and disperseness (microstructure) of the metal.

Card 5/6

There are 6 figures, 1 table and 5 Soviet references.

SOV/126-7-5-23/25

Investigation of Deformation of Metals under the Influence of Low Stresses II. Influence of an Adsorption-Active Medium on the Creep of Copper and Aluminium

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M. V. Lomonosova (Moscow State University imeni M.V. Lomonosov)

SUBMITTED: January 29, 1958

Card 6/6

SHORSHOROV, M.Kh.; AMFITEATROVA, T.A.; NAZAROV, G.V.

Weldability of IMPl titanium. Titan i ego splavy no. 1:180-193 '58. (MIRA 14:5)

1. Institut metallurgii AN SSSR.
(Titanium—Welding)

5(4) SOV/20-122-4-29/57

AUTHORS: Ostrovskiy, V. S., Amfiteatrova, T. A., Yampol'skiy B. Ya.

TITLE: On the Influence of Oxide Films and of an Adsorption-Active Medium on the Creep of a Copper Wire (O vliyanii okisnykh plenok i adsorbtsionno-aktivnoy sredy na polzuchest' mednoy provoloki)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 4, pp 643-645 (USSR)

ABSTRACT: The explanation of the influence of thin oxide films on the mechanical properties of polycrystals is very important. The authors found out that the deformation of a polycrystalline copper wire is impeded if it is carried out in water. The samples - wires of electrolytic copper of 0,5 mm diameter - were tempered in order to get the grain dimensions ($\sim$0,1 mm) necessary for the optimum observation of the adsorption effect. The wires were stretched by a constant stress(below yield point) by means of a special apparatus. By a deformation in distilled water, the initial creep velocity and also the deformation accumulated up to a given instant of time decreases sharply with respect to the variations of these

Card 1/3

On the Influence of Oxide Films and of an Adsorption-Active Medium on the Creep of a Copper Wire

quantities as a result of experiments carried out in air. The curve for the creep in water is noticeably lower than the curve for the creep in air. If the samples are immersed in water, they are covered by a reddish oxide film the thickness of which amounts to some hundreds of Ångström. The formation of this oxide film is caused, apparently, by the dissolution of air oxygen in water. The above-discussed strengthening of the wires takes place only in the presence of oxide films. Surface-active substances (for instance, butyl alcohol) adsorbed on the metal from an aqueous medium, increase the creep velocity with respect to the creep in water and in air. According to the results of this paper, thin oxide films may exercise considerable influence on the mechanical properties of monocrystals and also of polycrystalline specimens. The diminishing of the creep velocity by the influence of thin oxide films on the surface of metals may be explained on the basis of dislocation hypotheses. The authors thank Ye. D. Shchukin for his useful advice. There are 1 figure, 1 table, and 11 references, 7 of which are Soviet.

SOV/20-122-4-29/57

On the Influence of Oxide Films and of an Adsorption-Active Medium on the Creep of a Copper Wire

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

PRESENTED: May 30, 1958, by P. A. Rebinder, Academician

SUBMITTED: May 9, 1958

Card 3/3

AMFITEATROVA, T.A.

Investigation of the thixotropic properties of structurated colloidal systems, and their use in the study of painting materials. Lakokras. mat. i ikh prim. no.4:58-63 '60. (MIRA 13:10)
(Painting materials) (Rheology)

OSTROUMOVA, L.Ye.; AMF'ITEATROVA, T.A.; SHVAYKOVSKAYA, G.V.; YEGOROVA, L.S.

Thixotropic alkyd resins. Report No.1: Synthesis of polyamides structurating alkyd resins. Lakokras.mat.i ikh. prim. no.1:23-29 '61. (MIRA 14:4)

(Resins, Synthetic) (Polyamides)

40968

S/081/62/000/016/035/043
B171/B186

15.8111

AUTHORS: Trapeznikov, A. A., Shalopalkina, T. G., Amfiteatrova, T. A.

TITLE: Rheological and thixotropical properties of dispersions of alkyd resins modified by polyamid resins

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 16, 1962, 546, abstract 16P246 (Lakokrasochn. materialy i ikh primeneniye, no. 5, 1961, 3 - 10)

TEXT: The rheological and thixotropical properties of alkyd polyamid resin (APR) (alkyd resin modified by polyamid resin) dispersions in white spirit were investigated over large ranges of deformation velocities ($5 \cdot 10^{-3}$ - $5 \cdot 10^{2}$ sec^{-1}), of resin concentrations (30 - 90%), and of temperature, using a complex elasto-viscosimeter, which made it possible to reproduce the actual conditions under which APR-based paints are used. It has been established that the systems under investigation show clearly defined strength and thixotropies of viscosity. In particular, it has been shown that the viscous structure of the paint can be re-established

Card 1/2

by a low gradient flow after having been destroyed at a high velocity gradient. The characteristics of APR dispersions at early stages of their structure being re-established, are due to the viscous thixotropy, whereas after a long period of rest they are conditioned by strength and thixotropies of viscosity. It has been shown that the stability of structure and the viscosity quickly increase (following the exponential law) with the increase of the resin concentration, so that the running-off of the paint during its application is substantially changed. Data for deformation and rupture lead to the conclusion that the particles of APR are relatively compact and that the system has the character of a concentrated suspension. The effect of rheological and thixotropical properties of APR on the process of film formation and on the stability of pigment-containing systems has been investigated. [Abstracter's note: Complete translation.]

The breaking-up of grains ....

experiments were carried out by decanting the liquid metal remaining after different lengths of time. Metallographic examination of longitudinal sections showed that solidification took place from the periphery inwards. The structure immediately adjacent to the walls was not destroyed by the ultrasonic vibrations and was still columnar. The remainder of the casting was fine-grained. It is proposed that the fine grain size is due to nucleation by solid fragments broken from the columnar zone under the action of ultrasonic vibrations. Further experiments showed that the columnar peripheral zone was not present when metal was poured into a mould preliminarily heated to 700 °C. In this case solidification begins only from the contact with the ultrasonic instrument. The solid metal so formed is broken up by the vibrations and causes grain refinement of the casting. The next experiments were carried out by heating the aluminium to 740 - 750 °C and allowing solidification in the crucible in air (cooling rate about 0.5 °C/sec). From the moment when solidification temperature was reached, vibrations were introduced into the melt for different lengths of time

S/276/63/000/002/031/052
A052/A126

AUTHORS: Amfiteatrova, T.A., Yermolayeva, T.A., Abramson, D.L., and Yakubovich, S.V.

TITLE: Effect of titanium dioxide modification on rheological properties of "tixotropic" (tiksotropnykh) enamels

PERIODICAL: Referativnyy zhurnal, Tekhnologiya mashinostroyeniya, no.2 , 1963, 110, abstract 2B602 (Lakokrasochn. materialy i ikh primeneniye, no. 4, 1962, 30-32)

TEXT: The results of investigations of rheological properties of "tixotropic" enamels produced by using modified titanium dioxide samples are reported. It is shown that, if titanium dioxide is treated with inorganic aluminum, phosphorus and silicon compounds, the strength of the enamel structure increases as compared with the enamel containing untreated pigments; surface active substances (alkamone OC-2(OS-2)) at 0.1, 0.5 and 1% by weight destroy the structure of enamel and reduce considerably its strength; if titanium dioxide is treated successively with aluminum phosphate and alkamone OS-2, the strength of the structure of enamel decreases

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Effect of titanium dioxide...

S/276/63/000/002/031/052
A052/A126

in the same way as if treated with alkamone alone; titanium dioxide samples of anatasic and rutilic modification treated with aluminum phosphate, aluminum hydroxide and silicic acid can be recommended for the production of "tixotropic" enamels; titanium dioxide modified by alkamone OS-2 cannot be used for the production of said enamels.

(Abstracter's note: Complete translation.)

Card 2/2

L 64246-65 EWT(m)/EPF(c)/EWA(d)/EWP(j)/T/EWP(t)/IR(b) RM/JD/WB

ACCESSION NR: AP5020221 UR/0069/65/027/004/0489/0493

54.182.025

AUTHORS: Amfiteatrova, T. A.; Shalopalkina, T. G.; Trapeznikov, A. A.

TITLE: Effect of surface-active agents on the thixotropic properties of alkyd-polyamide resins

SOURCE: Kolloidnyy zhurnal, v. 27, no. 4, 1965, 489-493

TOPIC TAGS: surface active agent, surface active substance, surface activity, polyamide resin, polymer

ABSTRACT: The mechanism of the thixotropic structure formation induced by surface-active agents was investigated. The effect of equimolar amounts of the following surface-active agents on the thixotropic properties of a dispersion of heklyd in white spirits was studied: butyl alcohol, octyl alcohol, stearic acid, oxadecylamine, water, oxyethylated cetyl alcohol with two oxyethyl groups, oximecyclohexanon, alkamon OS-2 and siccative 63. The experimental method used in determining thixotropic properties was that of A. A. Trapeznikov and T. G. Shalopalkina (Kolloidn. zh. 19, 232, 1957). It was found that small additions of surface active agents enhance the strength of the structure, whereas large

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L 6421 6-65

ACCESSION NR: AP5020221

3

additions decrease it. Surface active-agents with a large number of functional groups, e.g., alkamon-OS-2, cause a breakdown of the hollyd structure at relatively low concentrations. This effect was also observed on systems pigmented with rutile. Orig. art. has: 1 table and 5 graphs.

ASSOCIATION: Institut fizicheskoy khimii, AN SSSR (Institute for Physical Chemistry, AN SSSR)

SUBMITTED: 22Jul63 ENCL: 00 SUB CODE: GC

NO REF SOV: 005 OTHER: 002

Card 2/2

AMFITEATROVA-LEVITSKAYA, A.N.

In memory of a friend. Trudy Inst.ist.est.i tekh. 28:122-137 '59. (MIRA 13:5)
(Lebedev, Petr Nikolaevich, 1866-1912)

AMIANTOV, A.I.

Simple staining of diphtheria bacillus nuclei. Zhur. mikrobiol. epid. i immun. no.10:97 O '54. (MLRA 8:1)

1. Iz Shakhtinskoy sanitarno-bakteriologicheskoy laboratorii
(STAINS AND STAINING (MICROSCOPY))
(CORYNEBACTERIUM DIPHTHERIAE)

AMIANTOV, A.N.

USSR/Radiophysics - Statistical Phenomena in Radiophysics, I-3

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 35257

Author: Amiantov, A. N., Tikhonov, V. I.

Institution: None

Title: Effect of Normal Fluctuations on Typical Nonlinear Elements

Original Periodical: Izv. AN SSSR, Otd. tekhn. n., 1956, No 4, 33-41

Abstract: A method is given for calculating the moments of various orders under the influence of normal fluctuations on inertialess nonlinear elements with piecewise-linear characteristics. With this, the normal function of the probability density is represented in the form of an infinite series in powers of the correlation coefficient of the acting random disturbance ρ (Kramer, G., Mathematical Methods of Statistics, GIIL, 1948, 321). In particular, for the correlation function of the input signal of a limiter, the following expression was obtained:

Card 1/2

AMIANTOV, I. N.

621.372.012 : 621.396.822 1812

Influence of Normal Fluctuations on Typical Nonlinear Elements.—I. N. Amiantov & V. I. Tikhonov. (*Bull. Acad. Sci. U.R.S.S., tech. Sci.*, April 1956, No. 4, pp. 33-41. In Russian.) A method of calculating moments of various orders in the case of normal fluctuations acting on inertial nonlinear elements is presented. Piecewise linear characteristics are assumed.

AMIANTOV, I.N.

Category : USSR / Radio Physics. Statistical Phenomena in Radio Physics. I-3

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 7230

Author : Tikhonov, V.I., Amiantov, I.N.
Title : Response of a Self-Excited Generator to Slow Fluctuations.

Orig Pub : Radiotekhn. i elektronika, 1956, 1, No 4, 428-432.

Abstract : The small-parameter method is used to analyze the amplitude and phase fluctuations of an auto-generator, caused by the action of noise with narrow spectrum on the generator. Slow fluctuations in the anode supply of the generator are considered. Relations are obtained for the statistical characteristics of the amplitude and instantaneous frequency, with which the average values and the dispersion of the phase incidence during the time are calculated. In conclusion, by way of an example, an estimate is made of the error introduced by instability of the anode voltage of the generator in the measurement of distance by interference methods.

Card : 1/1

AMIANTOV, I.N.

PA - 2295

AUTHOR: TIKHONOV, V.I., AMIANTOV, I.N.

TITLE: The Influence Exercised by Fluctuations on a Phase Detector. (Vozdeystviye flyuktuatsiy na fazovyy detektor. Russian).

PERIODICAL: Radiotekhnika, 1957, Vol 12, Nr 2, pp 39-50 (U.S.S.R.)

Received: 4 / 1957 Reviewed: 4 / 1957

ABSTRACT: The combined influence exercised by the usuful signal and the disturbance on a phase detector is analyzed. The task is solved by the so-called direct method which is applied to a scheme variety of a phase detector such as is used in radio beam stations for the automatic accompaniment according to angular coordinates. The statistical characteristics of the output voltage are determined. The most important are the average value of voltage, the dispersion, and the correlation coefficient. The two-dimensional density of probability, which is given in form of a series, the two-dimensional density of the probability of the harmonic signals, the two-dimensional moments of the currents, and the formula for the two-dimensional moment of fluctuation voltage in the load on the phase detector in the case of the action of normal fluctuations alone are derived. Next, the average value of the voltage is computed; when computing its integral two limiting cases must be distinguished according to the value of the fraction (amplitude/dispersion). Next, the function of the correlation for voltage is set up and the errors of the phase detector due to fluctuations are investigated. On the basis of an example the systematical- and chance-errors are pointed out. Chance-errors do not characterize

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SOV-109-3-4-27/28

AUTHORS: Tikhonov, V. I. and Amiantov, I. N.

TITLE: Discussion: Reply to V. S. Troitskiy (Diskussii: Otvet V. S. Troitskomu)

PERIODICAL: Radiotekhnika i Elektronika, 1958, Vol 3, Nr 4, pp 580-581 (USSR)

ABSTRACT: The authors agree with V. S. Troitskiy that their Eq.(3) should be regarded as being approximate. On the other hand they disagree with his second conclusion. However, the authors express their gratitude to V. S. Troitskiy for his interest in their work. There are 6 references, 2 of which are Soviet and 4 English.

SUBMITTED: October 19, 1957

1. Electron tube oscillators--Mathematical analysis 2. Electron tube oscillators--Performance 3. Electron tube oscillators--Theory

Card 1/1

AUTHORS: Amiantov, I. N., Tikhonov, V. I. (Moscow) 103-19-4-5/12

TITLE: Influence of Fluctuations on the Operations of an Auto-Range-Finder (Vliyaniye fluktuatsiy na rabotu avtodal'nomera)

PERIODICAL: Avtomatika i Telemekhanika, 1958, Vol. 19, Nr 4, pp. 325-333 (USSR)

ABSTRACT: The system of an automatic convoy of the target by radar according to the distance here is called a auto-rangefinder. A structure scheme of such a system is given here and a short description of the mode of operation of such an auto-rangefinder is given. The operation of the simplest model of an auto-rangefinder in the presence of sufficiently small fluctuations and of an immovable target is examined. In the construction of the model the following was assumed: 1) The shape of the pulses, which are reflected by the target, is approximated by a trapezoid, while the selector-impulses are assumed to be rectangular ones with certain height. 2) The differential detector reacts on the difference of the impulse-areas of the time detector S_2 and S_1. 3) The shift δT_n of the selector impulses with regard to the sounding pulse in the n-th period of

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repetition is proportional to the increase in voltage at the input of the time modulator: $\delta T_n = k_2 \Delta u_D^{(n)}$. T_n denoting the sounding pulse. $\Delta u_D^{(n)}$ denotes the voltage increase at the output of the differential detector. k_2 denotes a certain proportionality factor. In the investigation of the disturbances it is assumed that at the system input beside the intelligence signal $v(t)$ act also eigenfluctuations from the radio receiver output. These form an arbitrary steady process $\xi(t)$. It is assumed that the intensity of the fluctuations $\xi(t)$, which is characterized by the dispersion σ^2, is not too high in such a way that the detuning ΔT_n is low and the possible wrong response of the coincide tube can be neglected. It is shown that in the case of the coincidence tube can be neglected. It is shown that in the case of not too high fluctuations the difference $S_2^{(n)} - S^{(n)}$ is an random quantity. The equation (1o) is derived for a closed circuit and graphically interpreted. It is shown that the fluctuations cause a change of the inclination at the "reflecting line" and a shift of it along the axis of ordinates. The change of the inclination and the shift are different in case of different.n. The detuning ΔT_n in the general case is a nonsteady

random function of the discreet $t_n = nT_o$, whereby the mean value is $\overline{\Delta T_n} = 0$. Such a character of ΔT_n makes it necessary to determine the stability, the instability, and the error of the tracking circuit of the auto-tracking system separately. It is assumed that the system is stable, if a finite limit of the sequence of ΔT_n^2 exists; $\sigma^2_{\Delta T} = \lim_{n \to \infty} \Delta T_n^2$. The system is unstable if no finite limit exists. As quantitative measurement of the error of the stability of the system the quantity

$$\sigma_{\Delta T} = \sqrt{\lim_{n \to \infty} \overline{\Delta T_n^2}}$$ is assumed.

In the next section the statistical characteristics are investigated and the equation (22) is derived for $\sigma^2_{\Delta T}$. The first term characterizes the influence of the propagation of the disturbation at the top and at the edges of the pulse, while the second term reproduces the vibration of the response-moment. For low σ an approximated formula (24) is obtained. If a concrete form of the correlation factor $R(\tau)$ is chosen, numerical evaluations according to formulae (23) and (24) can

be performed. Finally the equation for the limit of stability is solved and the formula (25) derived for σ_0^2. In a three-dimensional space with the coordinates k, u_0 and $\sigma^2(25)$ determines a surface. An intersection of this surface with the plane k=constant results in a parabola, and an intersection with the plane u_0 = constant a hyperbola. Points within this surface belong to the stable domain, points outside of it belong to the unstable domain. There are 6 figures, and 2 references, which are Soviet.

SUBMITTED: March 29, 1957

AVAILABLE: Library of Congress

1. Radar range finders---Operation 2. Radar range systems ---Analysis

Card 4/4

AMIANTOV, I. N.: Master Phys-Math Sci (diss) -- "The application of the theory of solutions to problems of detecting signals and isolating signals from noise". Moscow, 1959. 8 pp (Moscow State U im M. V. Lomonosov, Phys Faculty), 100 copies (KL, No 13, 1959, 99)

AUTHOR: I.N. Amiantov SOV/109- - -4-3-14/38

TITLE: Inertialess Transformations of the Envelope of Quasi-Harmonic Fluctuations (Bezynertsionnyye preobrazovaniya ogibayushchey kvazigarmonicheskikh fluktuatsiy)

PERIODICAL: Radiotekhnika i Elektronika, 1959, Vol 4, Nr 3, pp 449-456 (USSR)

ABSTRACT: It is assumed that a stationary normal random process $\zeta(t)$ is characterised by the parameters expressed by Eq (1), where $F(\omega)$ is the power spectrum of $\zeta(t)$. If the power spectrum is symmetrical with respect to a centre frequency ω_0, and the bandwidth of the spectrum $\Delta\omega \ll \omega_0$, the process can be represented as:

$$\zeta(t) = A(t) \cos\left[\omega_0 t + \vartheta(t)\right] . \qquad (2)$$

where $A(t)$ is a slowly changing envelope of the quasi-harmonic noise $\zeta(t)$. The correlation coefficient R of $\zeta(t)$ also contains an envelope, as can be seen from Eq (3). The two-dimensional probability density distribution of the quantities $A_1 = A(t)$ and $A_2 = A(t+\tau)$ is in the form of Eq (4), where I_0 is the Bessel function of the zero order. It is assumed that the

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Inertialess Transformations of the Envelope of Quasi-Harmonic Fluctuations

envelope undergoes the following inertialess transformations:

$$\eta_1 = G_1(A_1); \quad \eta_2 = G_2(A_2). \tag{5}$$

In various problems it is necessary to evaluate the 2nd moment of these transformations; this is defined by:

$$\langle \eta_1 \eta_2 \rangle = \int_0^\infty \int_0^\infty w_2(A_1 A_2)\, G_1(A_1)\, G_2(A_2)\, dA_1 dA_2 . \tag{6}$$

The averaging in Eq (6) can be done if $w_2(A_1A_2)$ is expanded into a series in terms of r^2. Using the definitions introduced on page 450, it is shown that the two-dimensional probability density can be expressed (Ref 2) in the form of Eqs (9) and (10). If $\eta_1 = g_1(R_1)$ and $\eta_2 = g_2(R_2)$, the two-dimensional moment can be expressed by Eq (11) or by Eq (14). Similarly, if $\eta_1 = h_1(X_1)$ and $\eta_2 = h_2(X_2)$, the two-dimensional moment is expressed by Eq (18). When G_1 and G_2 denote power-type transformations, the two-dimensional moment can be evaluated provided the moments of the type

Inertialess Transformations of the Envelope of Quasi-Harmonic Fluctuations

$A_1^p A_2^q$ are known. It is shown that for this case the moment can be expressed as Eq (29). When the transformations are defined by Eq (30), which transforms the peaks of the envelope above a certain level γ into rectangular pulses having an amplitude g_o, the correlation coefficient of the transformed signal is given by Eq (35). The coefficients B of Eq (35) are defined by Eq (36). The values of the correlation coefficient are plotted in Fig 1. When the transformation defined by Eq (38) is carried out, the correlation coefficient of the output signal is given by Eq (43), where the coefficients C are defined by Eq (44). The values of the correlation coefficient for this case are plotted in Fig 2. The

SOV/109- -4-3-14/38

Inertialess Transformations of the Envelope of Quasi-Harmonic Fluctuations

author expresses his gratitude to V.I. Tikhonov for discussing this work.

Card 4/4 There are 2 figures and 3 references, 2 of which are English and 1 Soviet.

ASSOCIATION: Fizicheskiy Fakul'tet Moskovskogo gosudarstvennogo universiteta imeni M.V. Lomonosova
(Physics Department of Moscow State University imeni M.V. Lomonosov)

SUBMITTED: November 11, 1957

83150
S/108/60/015/009/002/008
B002/B067

6.9000; 6.9400

AUTHORS: Tikhonov, V. I., Amiantov, I. N., Members of the Society (VNOR:E)

TITLE: Probability Densities for the Duration of Pips of Fluctuations

PERIODICAL: Radiotekhnika, 1960, Vol. 15, No. 9, pp. 10-20

TEXT: Very complex formulas are obtained by the rigid theoretical solution for the probability densities of the duration of pips of noise fluctuations, thus rendering calculations very extensive. Three methods are available for approximate calculation: 1) Rice's method (Ref. 2); 2) the method of uncorrelated pulses; 3) The method of least squares. The present paper gives the numerical values (Tables 1 and 2) obtained by the various methods and a comparison with experimental data. Oscillograms were taken of the individual random processes, and were also evaluated (Fig. 4). Besides, the results of Ref. 12 are given, which were obtained by another method (Fig. 5). By this method, the pips of fixed duration were transformed into standard pulses, and the number of standard pulses was then chosen for a sufficiently long period of time.

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83150

Probability Densities for the Duration of Pips of Fluctuations

S/108/60/015/009/002/008
B002/B067

A comparison of the calculated values with the curve obtained (Fig. 7) shows good agreement. There are 7 figures, 2 tables, and 15 references: 11 Soviet, 2 British, and 1 Australian.

SUBMITTED: July 24, 1959

IX

Card 2/2

AMIANTOV, I.N.; GRUZDEV, V.V.

Dispersion of the error of a discrete linear system with a random amplification coefficient. Radiotekh. i elektron. 10 no.9:1623-1627 S '65. (MIRA 18:9)

AMIANTOVA, L.D.

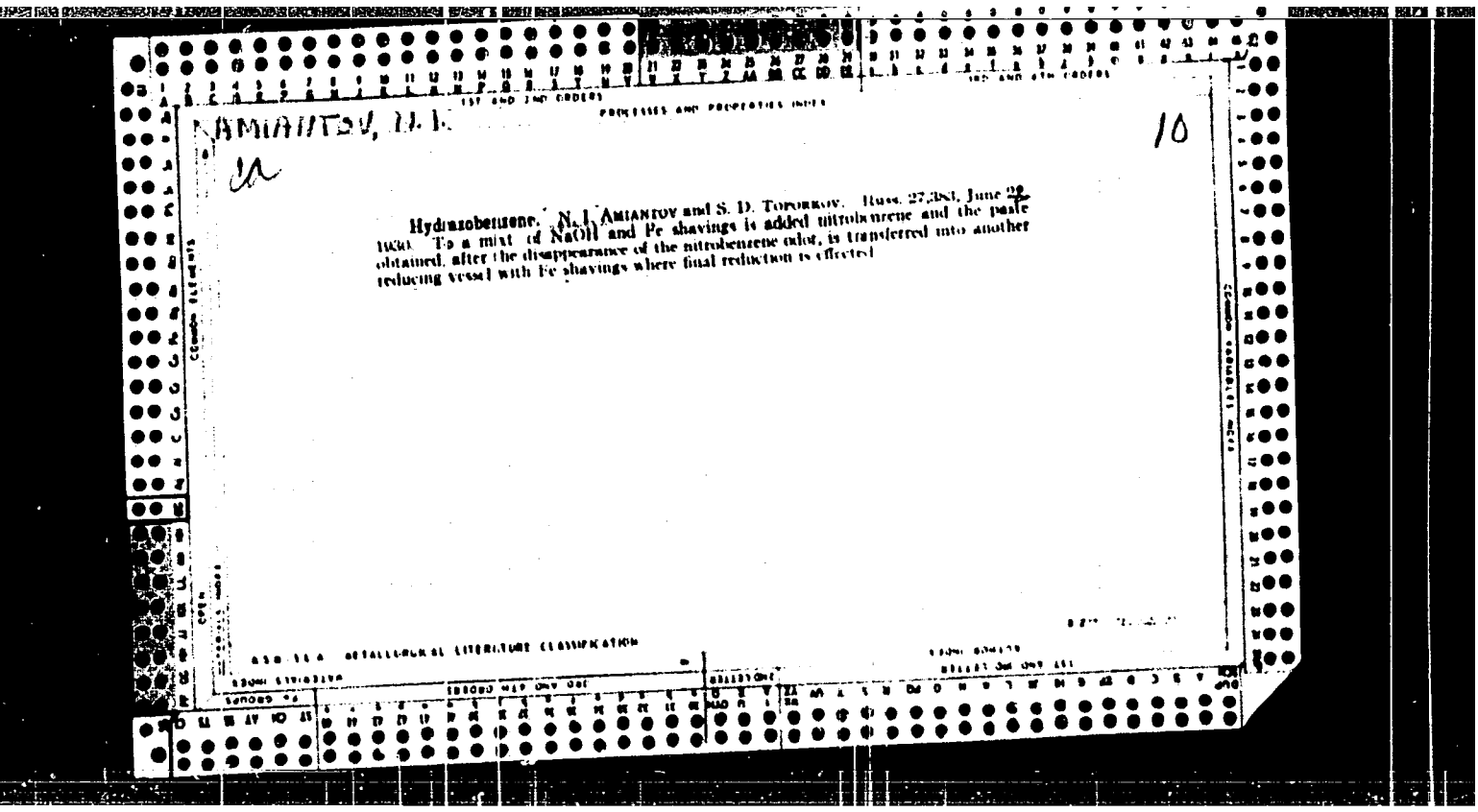
Stability of reactions of the organism to antigenic irritation.
Dokl. AN SSSR 136 no.4:982-985 F '61. (MIRA 14:1)

1. Institut normal'noy i patologicheskoy fiziologii Akademii meditsinskikh nauk SSSR. Predstavleno akademikom V.N. Chernigovskim.
(ANTIGENS AND ANTIBODIES) (NERVOUS SYSTEM)

AMIANTOVA, L.D.

Dynamics of the accumulation of antibodies in animals with varying types of nervous systems under conditions of simultaneous vaccination with several antigens. Zhur. mikrobiol., epid. i immun. 32 no.9: 139-140 S '61. (MIRA 15:2)

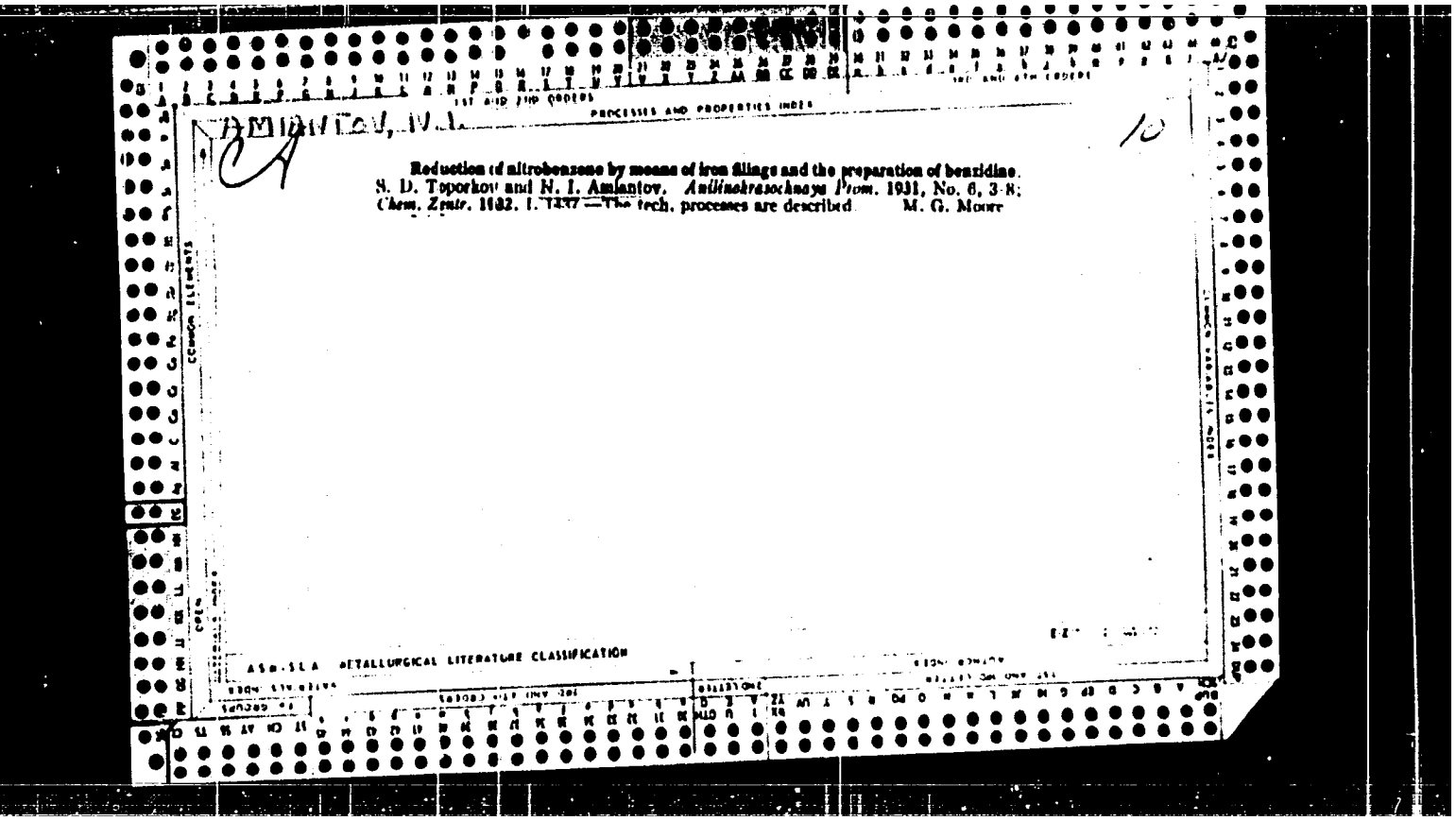
1. Iz Instituta normal'noy i patologicheskoy fiziologii AMN SSSR.
(IMMUNITY) (NERVOUS SYSTEM)



AMIANTOV, N. I.

10

Hydrazobenzene. N. I. Amiantov and S. D. Toronkov. Russ. 27,381, June 29, 1936. To a mixt. of NaOH and Fe shavings is added nitrobenzene and the paste obtained, after the disappearance of the nitrobenzene odor, is transferred into another reducing vessel with Fe shavings where final reduction is effected.

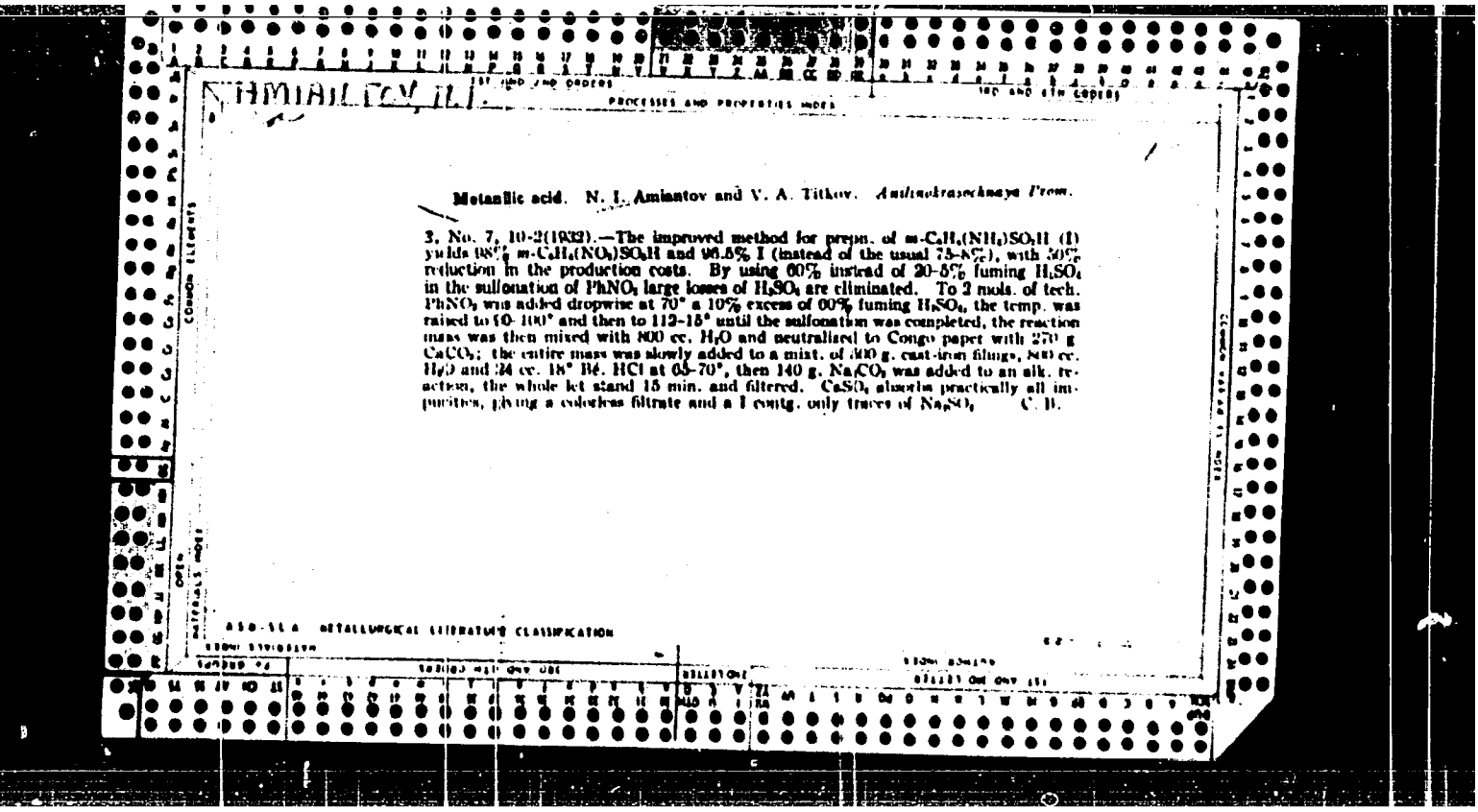


PROCESSES AND PROPERTIES INDEX

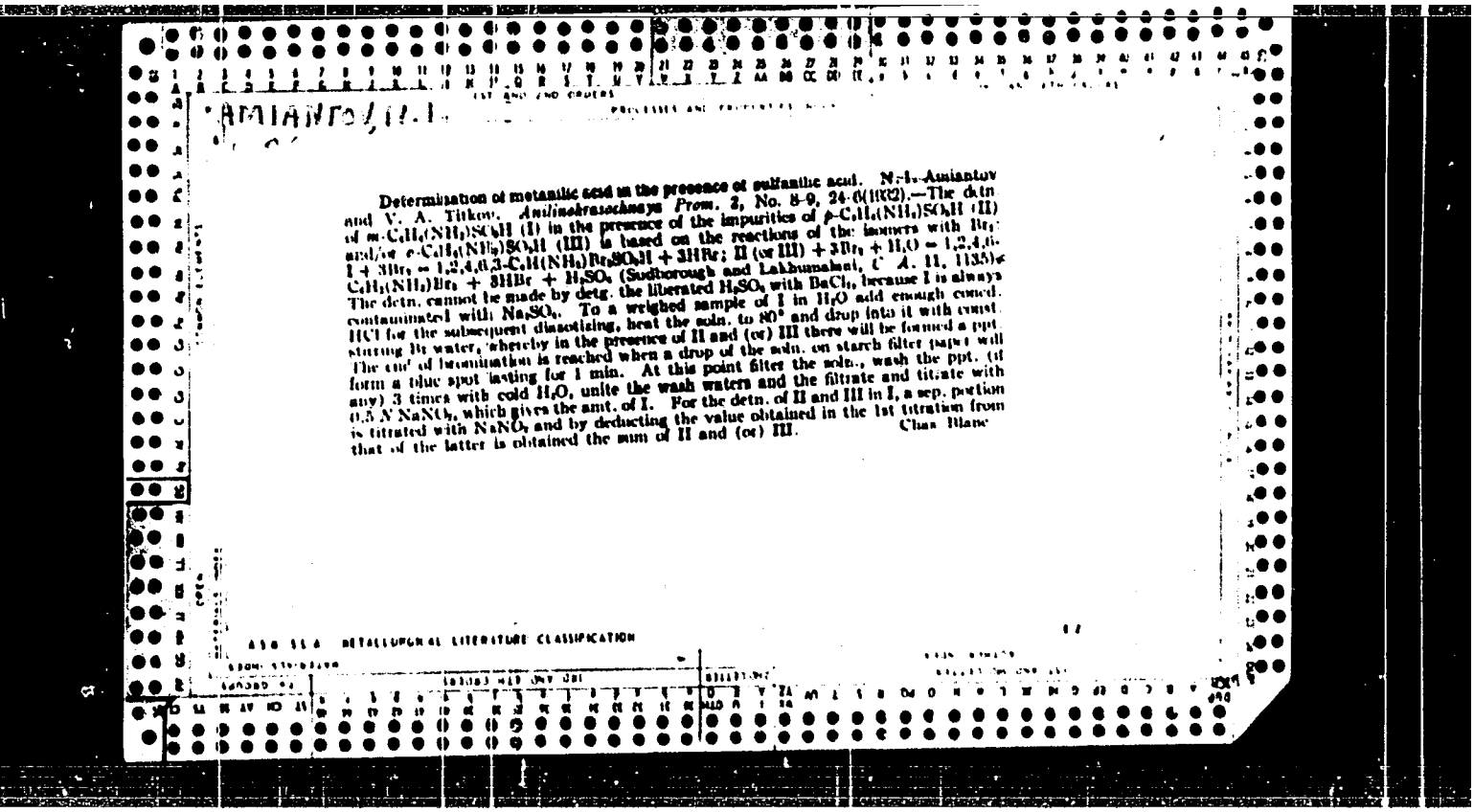
AMANTOV, N.I.

Reduction of nitrobenzene by means of iron filings and the preparation of benzidine. S. D. Toporkov and N. I. Amantov. *Anilinokraskochnaya Prom.* 1931, No. 6, 3-8; *Chem. Zentr.* 1932, I, 1237.—The tech. processes are described. M. G. Moore

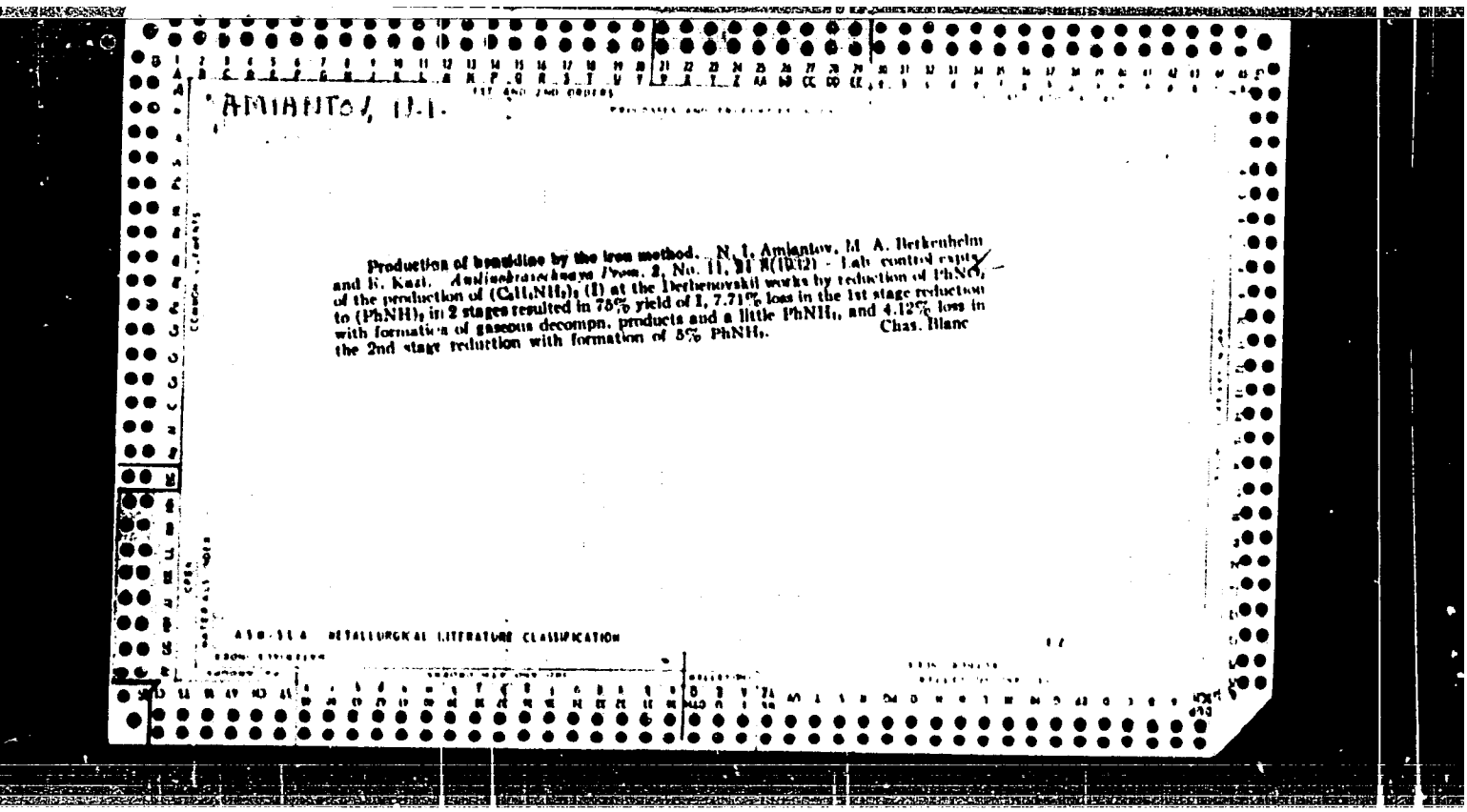
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Metanilic acid. N. I. Aminatov and V. A. Titkov. *Anilinokrasochnaya Prom.* 3, No. 7, 10-2(1933).—The improved method for prepn. of m-$C_6H_4(NH_2)SO_3H$ (I) yields 98% m-$C_6H_4(NO_2)SO_3H$ and 96.8% I (instead of the usual 75–80%), with 50% reduction in the production costs. By using 60% instead of 20–25% fuming H_2SO_4 in the sulfonation of $PhNO_2$ large losses of H_2SO_4 are eliminated. To 2 mols. of tech. $PhNO_2$ was added dropwise at 70° a 10% excess of 60% fuming H_2SO_4, the temp. was raised to 90–100° and then to 115–18° until the sulfonation was completed, the reaction mass was then mixed with 800 cc. H_2O and neutralized to Congo paper with 270 g. $CaCO_3$; the entire mass was slowly added to a mixt. of 300 g. cast-iron filings, 800 cc. H_2O and 24 cc. 18° Bé. HCl at 65–70°, then 140 g. Na_2CO_3 was added to an alk. reaction, the whole let stand 15 min. and filtered. $CaSO_4$ almost practically all impurities, giving a colorless filtrate and a I contg. only traces of Na_2SO_4. C. B.



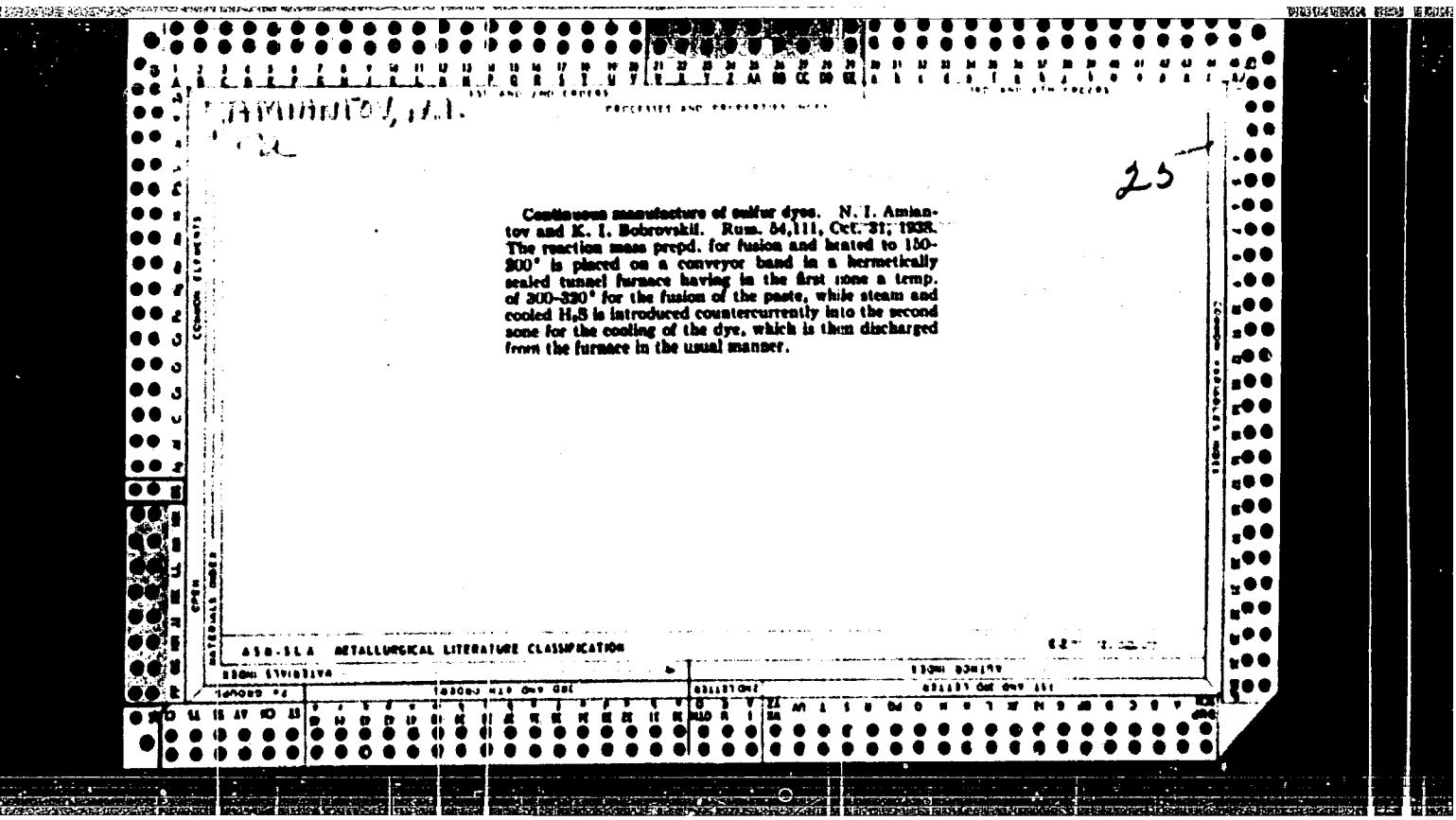
Determination of metanilic acid in the presence of sulfanilic acid. N. I. Anisimov and V. A. Titkov. *Anilinokrasochnaya Prom.* 2, No. 8-9, 24-6(1932).—The detn. of *m*-$C_6H_4(NH_2)SO_3H$ (I) in the presence of the impurities of *p*-$C_6H_4(NH_2)SO_3H$ (II) and/or *o*-$C_6H_4(NH_2)SO_3H$ (III) is based on the reactions of the isomers with Br_2: I + $3Br_2$ = 1,2,4,6,3-$C_6H(NH_2)Br_3SO_3H$ + 3HBr; II (or III) + $3Br_2$ + H_2O = 1,2,4,6-$C_6H_2(NH_2)Br_3$ + 3HBr + H_2SO_4 (Sudborough and Lakhumalani, *C. A.* 11, 1135). The detn. cannot be made by detg. the liberated H_2SO_4 with $BaCl_2$, because I is always contaminated with Na_2SO_4. To a weighed sample of I in H_2O add enough concd. HCl for the subsequent dissolving, heat the soln. to 80° and drop into it with constant stirring ltr water, whereby in the presence of II and (or) III there will be formed a ppt. The end of titration is reached when a drop of the soln. on starch filter paper will form a blue spot lasting for 1 min. At this point filter the soln., wash the ppt. (if any) 3 times with cold H_2O, unite the wash waters and the filtrate and titrate with 0.5 *N* $NaNO_2$, which gives the amt. of I. For the detn. of II and III in I, a sep. portion is titrated with $NaNO_2$ and by deducting the value obtained in the 1st titration from that of the latter is obtained the sum of II and (or) III. Chas Blanc



AMIANTOV, N.I.

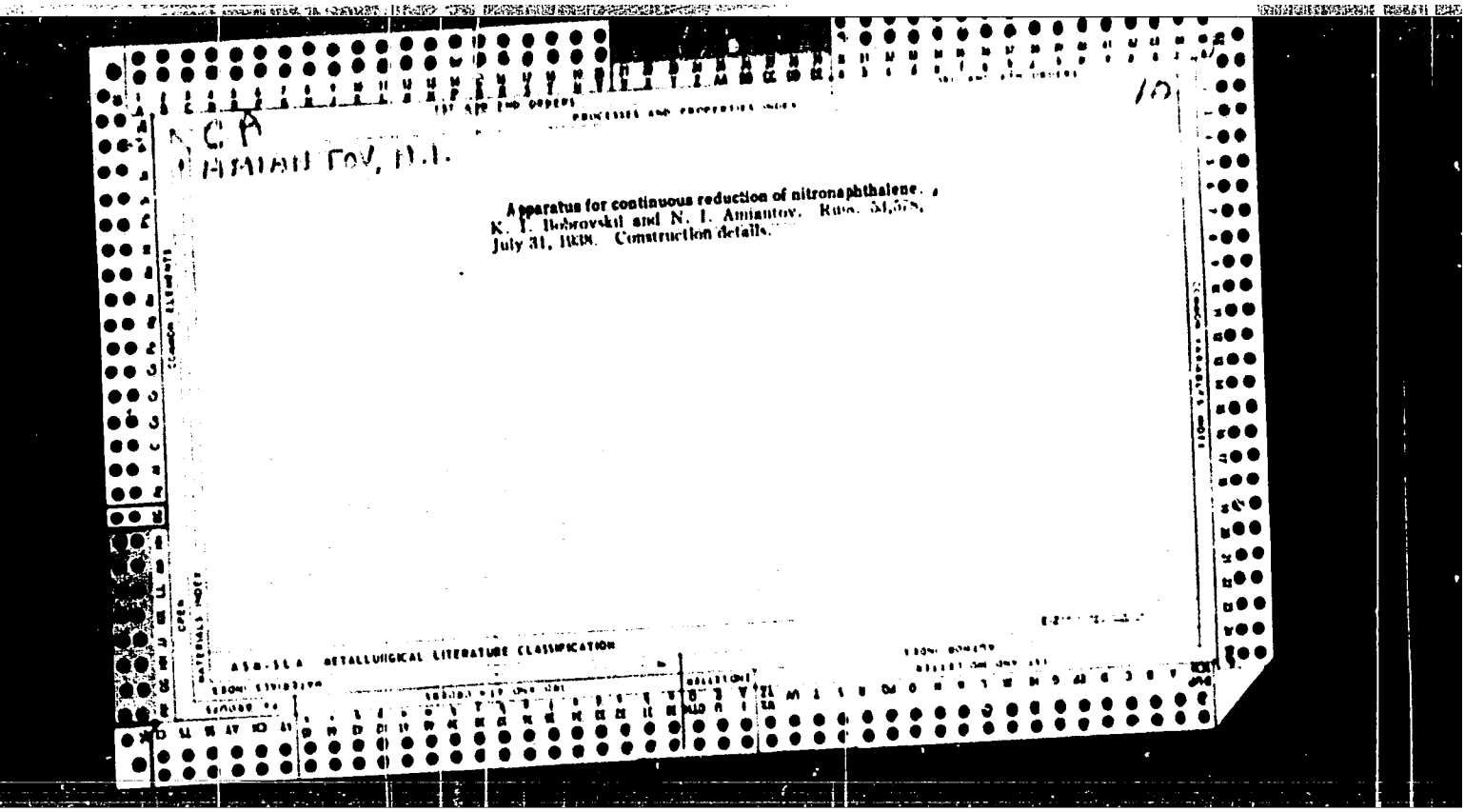
Production of benzidine by the iron method. N. I. Amiantov, M. A. Berkenheim and E. Kaal. *Anilinokrasochnaya Prom.* 2, No. 11, 21-8(1932). - Lab. control expts. of the production of $(C_6H_4NH_2)_2$ (I) at the Derbenovskii works by reduction of $PhNO_2$ to $(PhNH)_2$ in 2 stages resulted in 78% yield of I, 7.71% loss in the 1st stage reduction with formation of gaseous decompn. products and a little $PhNH_2$, and 4.12% loss in the 2nd stage reduction with formation of 8% $PhNH_2$.
Chas. Blanc

A50-51A METALLURGICAL LITERATURE CLASSIFICATION



Continuous manufacture of sulfur dyes. N. I. Amiantov and K. I. Bobrovskii. Rum. 54,111, Oct. 31, 1938. The reaction mass prepd. for fusion and heated to 150-200° is placed on a conveyor band in a hermetically sealed tunnel furnace having in the first zone a temp. of 300-320° for the fusion of the paste, while steam and cooled H_2S is introduced countercurrently into the second zone for the cooling of the dye, which is then discharged from the furnace in the usual manner.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



Apparatus for continuous reduction of nitronaphthalene.
K. I. Ibbrovskii and N. I. Amiantov. Russ. 51,575,
July 31, 1938. Construction details.

AMIANTOV, S.A.

52. S. A. AMIANTOV, S. T. AKIN'IAN: Apparatus to study solar radio emission at 500 mc (NIZMIR)

Abstract: A brief description is given of a radio telescope for 600 mc which is the ordinary radiometer with calibration according to a noisy diode. Regular diurnal observations were made during a number of months.

The same apparatus, operating with two antennas separated by 100λ, was used to measure the circular polarization of emission from local sources on the sun.

RADIOTEKHNIKA I ELEKTRONIKA, Vol 1, Nr 5, 1956, p 886

AMIANTOV, V.I. (Moskva); TIKHONOV, V.I. (Moskva)

Effect of normal fluctuations on standard nonlinear members.
Izv.AN SSSR.Otd.tekh.nauk no.4:33-41 Ap '56. (MLRA 9:8)
(Automatic control) (Radio circuits)

VYSOKOVA, T.M., kand.med.nauk, AMIANTOVA, I.S., GORDEYEVA, M.V.

"Problems of therapy and functional examinations in tuberculosis;" collected papers of the L'vov Institute of Tuberculosis Research. Probl.tub., 36 no.5:117-120 '58 (MIRA 11:8)
(TUBERCULOSIS)

PLETSITYY, D.F., LABINSKAYA, A.S., MONAYENKOV, A.M., KATSITADZE, V.A., AMIANTOVA, L.D.

Dynamics of blood antibody concentration immediately following revaccination. Zhur.mikrobiol. epid. i immun. 29 no.7:103-107 Jl '58 (MIRA 11:8)

1. Is Instituta normal'noy i patologicheskoy fiziologii AMN SSSR.
(DIPHTHERIA, immunology,
antibody in blood after revaccination in rabbits (Rus))
(TETANUS,
same (Rus))

AMIANTOVA, L.D.

Effect of vaccination on conditioned reflex activity in animals; author's abstract. Zhur.mikrobiol.epid. i immun. 29 no.7:108 Jl '58 (MIRA 11:8)

1. Iz Instituta normal'noy i patologicheskoy fiziologii AMN SSSR.
(REFLEX, CONDITIONED,
eff. of vacc. in animals (Rus))
(VACCINES AND VACCINATION, effects,
on conditioned reflexes in animals (Rus))

AMIANTOVA, L.D.

Study of typological characteristics of the higher nervous activity in rabbits. Zhur. vys. nerv. deiat. 10 no. 5:771-778 S-O '60. (MIRA 13:12)

1. Laboratoriya fiziologii immuniteta Instituta normal'noy i patologicheskoy fiziologii AMN SSSR.
(CONDITIONED RESPONSE)

SKORODUMOVA, I.V.; AMLANTOVA, L.D.

Morphological changes in experimental diphtherial intoxication in animals with different types of nervous systems. Zhur. mikrobiol. epid. i immun. 40 no.5:143-147 My '63.

(MIRA 17:6)

1. Iz Instituta normal'noy i patologicheskoy fiziologii AMN SSSR.

AMIANTOVA, M.A.; LEBEDEVA, V.B.

Paragonimosis of lungs. Probl. tub. 34 no.1:53-54 Ja-F '56
(MLRA 9:5)

1. Iz Moskovskogo gorodskogo nauchno-issledovatel'skogo tuberkuleznogo instituta (nauchnyy rukovoditel'-prof. V.L. Mynis)

(PARAGONIMUS, infect.
lungs)
(LUNGS, dis.
Paragonimus infect)

AMIANTOVA, M.A.; APANOVA, A.M.; ARTEM'YEVA, Z.S.

Concentration of streptomycin in the blood in tuberculosis therapy [with summary in French]. Probl.tub. 35 no.8:101-105 '57.
(MIRA 11:4)

1. Iz Moskovskogo gorodskogo nauchno-issledovatel'skogo tuberkuleznogo instituta (nauchnyy rukovoditel' - prof. V.L.Rynis)
(TUBERCULOSIS, ther.
streptomycin, determ. of blood concentration (Rus))

GINZBERG, R.Ye.; AMIANTOVA, M.A.

Study of the functional condition of tuberculosis patients by the respiratory pause method under control of a hemoxometer. Probl. tub. 36 no.8:51-57 '58. (MIRA 12:7)

1. Iz Moskovskoy gorodskoy tsentral'noy klinicheskoy tuberkuleznoy bol'nitsy (glavnyy vrach - prof. V. L. Rynis)
(TUBERCULOSIS) (BLOOD--OXYGEN CONTENT)

AMIANTOVA, M.A.

Conference on problems in clinical physiology at the Tuberculosis Institute of the Academy of Medicine of the U.S.S.R. Probl.tub. 37 no.5:110-115 '59. (MIRA 12:10)
(TUBERCULOSIS)

KINIS, V.L.; GINZBERG, R.Ye.; AMIANTOVA, M.A.

Functional restoration of respiration and blood circulation after surgical treatment of tuberculosis of the lungs. Probl.tub. 39 no.2:22-28 '61. (MIRA 14:3)

1. Iz Instituta tuberkuleza (dir. - chlen-korrespondent AMN SSSR prof. N.A. Shmelev) AMN SSSR i Moskovskoy gorodskoy tsentral'noy klinicheskoy tuberkuleznoy bol'nitsy (glavnyy vrach - zasluzhennyy deyatel' nauki prof. V.L. Kynis).
(LUNGS--SURGERY) (RESPIRATION) (BLOOD--CIRCULATION)

AMIANTOVA-FILIPPOVA, I.S.

Treatment of tuberculous pericarditis. Probl.tub. 36 no.7: 48-52 '58. (MIRA 12:8)

1. Iz vnelegochnogo otdeleniya (rukovoditel' Ye.N.Zorin) Moskovskogo instituta tuberkuleza Ministerstva zdravookhraneniya RSFSR (dir.-V.F.Chernyshev, zam.dir.po nauchnoy chasti - prof. D.D.Aseyev).

(PERICARDIUM--TUBERCULOSIS)

KOSITSKIY, G.I.; ASEYEV, D.D.; PLOTITSYNA, T.G.; VYSOKOVA, T.M.; AMIANTOVA-FILIPPOVA, I.S.; FEDOTOVA, Z.N.; SEREZHNIKOVA, S.F.

Respiratory disorders with signs of tuberculous intoxication. Probl.tub. 37 no.3:27-35 '59. (MIRA 12:6)

1. Iz Moskovskogo nauchno-issledovatel'skogo instituta tuberkuleza Ministerstva zdravookhraneniya RSFSR (dir.V.F.Chernyshev).
(TUBERCULOSIS, PULMONARY, compl.
resp. disord. in toxic stages (Rus))

AMIRZHANOV, S.A.

Correlation of serum enzyme activity with clinical symptoms and histological data in patients with hepatitis and cirrhosis. Akt. vop. pat. pech. no.2:106-119 '63. (MIRA 18:8)

AMIDZHIN, S.S.

Result of the treatment of ichthyosis with administration of normal horse serum. Vest. ven. i derm. no.4:16-21 Jl-Ag '54. (MLRA 7:8)

1. Iz nervnogo otdeleniya (zav. S.S.Amidzhin) 1-y gorodskoy detskoy bol'nitsy (glavnyy vrach B.L.Boyukliyeva), g. Sofiya (Bolgariya)

(ICHTHYOSIS, therapy,
*horse serum)
(SERUMTHERAPY, in various diseases,
*ichthyosis, horse serum)

AMIDZHIN, S.S.(Sofiya, Bolgariya)

Horse serum for treating ichtyosis. Vest.ven.iderm. no.3:52 My-Je '55. (MLRA 8:10)
(SKIN--DISEASES) (SERUM THERAPY)

ANGELOV, S., Akad.; GIGOV, A.; NIKOLOV, P.; AMIDZHIN, S.

Toxoplasmosis and its studies in Bulgaria. Suvrem. med., Sofia 7 no.11:79-83 1956.

(TOXOPLASMOSIS, epidemiology,
in Bulgaria (Bul))

AMIDZHIN, S.S.

Treatment of comatose forms of encephalitis in children. Zhur. nevr.i psikh. 60 no.7:817-823 '60. (MIRA 14:1)

1. Nevnoye otdeleniye (zav. S.S. Amidzhin) 1-y gorodskoy detskoy bol'nitsy (glavnyy vrach D. Kamenov), Sofiya.
(ENCEPHALITIS)

S/205/62/002/004/012/014
I015/I215

AUTHORS: Amigarova, M.I., and Duzhenkova, N.A.

TITLE: Radioprotective and radiomimetic effect of propyl-gallate in glycine and hemine solutions

PERIODICAL: Radiobiologiya, v.2, no.4, 1962, 607-610

TEXT: This is the continuation of a previous study. The glycine-propylgallate ratio in the present study was 10:1, 5:1 and 2:1 (molar concentrations), whereas the concentration of the amino-acid was $1x10^{-1}$M in all experiments.
The pH of the medium was adjusted to 3 and 7 with phosphate-citrate buffer and to 10 with borate buffer. Irradiation was carried out on freshly prepared solutions, from a ЭГО-2 (EGO-2) apparatus (Co^{60}). The dose rate was 300r/min, and the total dose 350cu. The amount of ammonium released from glycine was still directly proportional to the irradiation dose. The ammonium was determined with Kjeldahl's apparatus. It was found that the

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S/205/62/002/004/012/014
I015/I215

Radioprotective and radiomimetic...

protective effect of propylgallate depends on the pH and that it was greater in an alkaline medium. The effect of propylgallate on alkaline hemine solutions was also investigated. Crystalline hemine (1.40×10^{-5}M) was dissolved in 0.1 N NaOH. The concentration of propylgallate was that of the hemine. The reaction was recorded by the absorption in the visible light and UV spectra. It was found that propylgallate altered the characteristics of the hemine spectrum: the maximum of 612 mμ disappeared, the intensity of the maximum of 383 mμ decreased and a new maximum appeared at 265-270 mμ. These changes in the spectrum of hemine are similar to those which occur after ionizing irradiation, as well as following oxidation with inorganic peroxides (H_2O_2, $Na_2S_2O_8$). The equimolar addition of propylgallate was equivalent to an irradiation dose of 10cu of gamma-rays. There are 2 figures and 1 table.

SUBMITTED: November 27, 1961

Card 2/2

DUMOV, S.I.; TSEGEL'SKIY, V.L., inzh., retsenzent; AMIGUD, D.Z., inzh., retsenzent; PEVZNER, S.M., inzh., red.

[Manual for a course project on the subject "Equipment and technology of arc welding"] Rukovodstvo dlia kursovogo proektirovaniia po predmetu "Oborudovanie i tekhnologiia dugovoi svarki." Moskva, Mashinostroenie, 1965. 137 p. (MIRA 18:8)

ABDURASULOV, D.M.; ANILOVA, A.A.; FAZYLOV, A.A.; YUKHANANOV, I.M.

Use of ultrasonics in the diagnosis of diseases of the maxillary sinuses. Nov. med. tekh. no.2:30-33 '64.

(MIRA 18:11)

L 28016-66

ACC NR: AP6018197 SOURCE CODE: UR/0242/65/000/004/0052/0055

AUTHOR: Amilova, A.

ORG: Scientific Research Institute of Roentgenology, Radiology and Oncology, Ministry of Health, UzSSR (Nauchno-issledovatel'skiy institut rentgenologii, radiologii i onkologii Ministerstva zdravookhraneniya UzSSR); LOR Section, Clinical Hospital for First Aid (LOR otdeleniye klinicheskoy bol'nitsy neotlozhnoy pomoshchi)

TITLE: Ultrasonic diagnosis of malignant neoplasms in the maxillary sinuses

SOURCE: Meditsinskiy zhurnal Uzbekistana, no. 4, 1965, 52-55

TOPIC TAGS: tumor, pathology, ultrasonic irradiation

ABSTRACT: The author cites two cases in detail (with photographs of X-ray pictures and echograms) to substantiate his conclusion that echography is a valuable supplementary method in diagnosing ailments in the maxillary sinus. He states that echography can detect tumor injury of the maxillary sinus in the early stages when these changes are not evident using other methods. The ultrasonic method also makes it possible to differentiate malignant injuries to the maxillary sinus from other pathological processes taking place in it. Orig. art. has: 2 figures [JPRS]

SUB CODE: 06, 20 / SUBM DATE: 07Jul64

Card 1/1

DRENNOVA, K. A., prof.; GRISHIN, S. I., prof.; MARTYNENKO, I. I.; DADAMUKHAMEDOV, A. N.; IBRAGIMOV, R. I.; AMILOVA, A. A.; FEL'DMAN, F. Ya.; MESHKOVA, N. P.; SHENKER, D. I.

Condition of the ears nose and throat in children of preschool age in Tashkent. Vest. otorin. no.3:60-62 '61. (MIRA 14:12)

1. Iz Otorinolaringologicheskoy kafedry (zav. - prof. K. A. Drennova) Tashkentskogo instituta usovershenstvovaniya vrachey.

(TASHKENT--OTOLARYNGOLOGY)

ANIKOV, G. V., [redacted], Is. L.

Corresponding Members, Academy of Sciences USSR. Laboratory of Metal Physics, All-Union Institute of Aviation Materials, "Structure of Austenitic Heat-Resisting Steel of Type 13 Cr, 13 Ni, 2W (Ei-69), " Iz. Ak. Nauk SSSR, Otdel. Tekh. Nauk, No. 7-8, 1945. Submitted 29 Jan., 1945.

[redacted] Report U-1582, 6 Dec., 1951.